Sl. No.	Description of work	Unit	No.	Length	Breadth	Depth	Quantity	Rate in Rs.	Amount in Rs.
				m	m	m			
4	Cement concrete pavement.Construction of un-reinforced plain cement concrete pavement, thickness as per design, over a prepared sub base with OPC cement or any other type as per clause 1051.2.2 design mix M20/M30 , with 25mm and down size graded granite metal coarse aggregates and fine aggregtes , with superplastisiser @3lts confirming to IS9103-1999 Reaffirmed-2008 , mixed in a concrete mixer of not less than 0.6 cum capacity and appropriate weigh batcher as per approved mix design, laid in approved fixed side form work (steel channel, laying and fixing of 125 micron thick polythene film, wedges, steel plates including levelling the form work as per drawing). Spreading the concrete with shovels, rackers compacted using needle, screed and plate vibrator and finished in a continuous operation including provision of contraction, expansion, construction and longitudinal joints including groove cutting charges, joint filler, separation membrane, selant primer, joint sealant, admixtures as approved, curing compound, finishing to lines and grades as per drawing complete as per specifications. - M30 (at 360Kg per cum coarse aggregate @ 0.69cum and fine aggregate @ 0.46cum) ((P.No.177, I.No.22.6.1 of PW,P&IWTD SR 2016-17)								
	Road Portion	Cum							
	Shakthi temple to RO plant		1.00	80.00	3.00	0.15	36.00		
							36.00	6217.96	**223846.56**
5	Vaccum de-watering with vaccum pump and suction mat and compaction with skin floater clubbed with floating disc including cost of generator, HOM of machinery, Screed Vibratory, Power Floater, blade and disc etc., with all lead and lift.(P.No.177, I.No.22.7 of PW, P&IWTD SR 2016-17)								
	Road Portion	Sqm							
	Shakthi temple to RO plant		1.00	80.00	3.00		240.00		
							240.00	95.40	**22896.00**
6	KSRRB M 400-17, Providing, laying, spreading and compacting graded stone aggregate to wet mix macadam specification including premixing the Material with water at OMC in mechaniqal mix plant carriage ' of mixed Material by tipper to site, laying in uniform layers with paver in sub- base/ base course on well prepared surface and compacting with vibratory roller to achieve the desired density.complete as per specifications. MORTH Specification No. 406 (P.No.158, I.No.20.18 of PW,P&IWTD SR 2016-17)								
	Bad Reaches	Cum							
	Cross roads near Chokkanahallli		1.00	180.00	5.20	0.23	215.28		
	Bad Reaches		3	5.00	2.00	0.23	6.90		
			2	3.00	3.00	0.23	4.14		
			1	2.00	5.00	0.23	2.30		
			7	2.00	5.00	0.23	16.10		
							244.72	1768.08	**432684.54**
7	KSRRB M 500-6, Providing and applying primer coat with SS bitumen emulsion on prepared surface of granular Base such as WBM WMM including clearing of road surface and spraying primer at the rate of 0.60 kg\sqm using mechanical means complete as per specifications. As per MORTH specification clause No. 502 (P.No.161, I.No.21.6 of PW,P&IWTD SR 2016-17)								
	Bad Reaches	Sqm							
	Cross roads near Chokkanahallli		1	180.00	5.20	--	936.00		
	Bad Reaches		3	5.00	2.00	--	30.00		
			2	3.00	3.00	--	18.00		
			1	2.00	5.00	--	10.00		
			7	2.00	5.00	--	70.00		
							1064.00	27.56	**29323.84**

Sl. No.	Description of work	Unit	No.	Length	Breadth	Depth	Quantity	Rate in Rs.	Amount in Rs.
				m	m	m			
8	KSRRB 500-2: Cleaning the existing black topped surface with brooms, soft brushes and finally dusting with old gunny bags and / or compressed air to receive bituminous treatement including cost of all materials, labour, HOM of machineries complete as per specifications. MORTH Spec, Chapter 5 (P.No.161, I.No.21.2 of PW,P&IWTD SR 2016-17)								
	Bad Reaches								
	Shakthi temple to RO plant	Sqm							
	0-84								
	159-389		1	84.00	7.00	--	588.00		
	389-680		1	230.00	7.50	--	1725.00		
	680-1100		1	291.00	5.50	--	1600.50		
	from 0 to Chokkanahalli circle		1	420.00	6.00	--	2520.00		
	Cross road 1		1	160.00	7.00	--	1120.00		
	Cross Road 2		1	170.00	5.50	--	935.00		
	Cross Road 3		1	185.00	5.50	--	1017.50		
			1	100.00	5.50	--	550.00		
	Deduct prime coat						**10056.00**		
							-128.00		
							9928.00	3.18	**31571.04**
9	KSRRB M500-7 : Providing and applying tack coat using 80/100 grade bitumen (VG10) on prepared black topped surfaces at 2.5 Kg per 10 sqm, heating bitumen in boiler fitted with spray machineries complete as per specifications.MORTH / Chapter 5 (P.No.161 I.No.21.7 of PW,P&IWTD SR of 2016-17)								
	Bad Reaches	Sqm							
	For Laying BC								
	Shakthi temple to RO plant								
	0-84								
	159-389		1	84.00	7.00	--	588.00		
	389-680		1	230.00	7.50	--	1725.00		
	680-1100		1	291.00	5.50	--	1600.50		
	from 0 to Chokkanahalli circle		1	420.00	6.00	--	2520.00		
	Cross roads near Chokkanahallli		1	160.00	7.00	--	1120.00		
	Cross road 1		1	180.00	5.20	--	936.00		
	Cross Road 2		1.00	170.00	5.50	--	935.00		
	Cross Road 3		1.00	185.00	5.50	--	1017.50		
			1.00	100.00	5.50	--	550.00		
							10992.00	11.66	**128166.72**
10	KSRRB M500-19. Providing and laying bituminous concrete 30-40 mm compacted thickness with VG30 Bitumen grade using 40-60 HMP using crushed aggregates of grading II, premixed with bituminous binder at 5.4% of mix and filler, transporting the hot mix to work site, laying with a mechanical paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MoRT&H specification clause No. 500.9 complete in all respects as per specifications. MORTH Specification No. 509 (P.No.165 of I.No.21.22.6 in PW,P&IWTD S.R 2016-17)								
	Bad Reaches	Cum							
	Shakthi temple to RO plant								
	0-84		1	84.00	7.00	0.04	23.52		
	159-389		1	230.00	7.50	0.04	69.00		
	389-680		1	291.00	5.50	0.04	64.02		
	680-1100		1	420.00	6.00	0.04	100.80		
	from 0 to Chokkanahalli circle		1	160.00	7.00	0.04	44.80		
	Cross roads near Chokkanahallli		1	180.00	5.20	0.04	37.44		
	Cross road 1		1	170.00	5.50	0.04	37.40		
	Cross Road 2		1	185.00	5.50	0.04	40.70		
	Cross Road 3		1	100.00	5.50	0.04	22.00		
							439.68	7083.98	**3114684.33**

Sl. No.	Description of work	Unit	No.	Length	Breadth	Depth	Quantity	Rate in Rs.	Amount in Rs.
				m	m	m			
11	KSRRB M800-13. Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads at 250 gms per sqm area, thickness of 2.5mm is exclusive of surface applied glass beads as per IRC:35. The finished surface to be level, uniform and free from streaks and holes complete as per specifications. MORTH Specification No. 803.(P.No.185, I.No.24.15 of PW,P&IWTD SR 2016-17)								
	Edge line								
	Center line	Sqm	2	1820.00	0.10	--	364.00		
			0.5	894.00	0.10	--	44.70		
							408.70	542.72	**221809.66**
12							**Total Construction Cost**		**4475593.370**
13							**Cost towards Preparation of DPR LS**		**44756.00**
							Cost towards PMC / Third Party inspection LS		**44756.00**
14								**Sub Total**	**4565105.37**
							Miscellaneous and rounding off		**434894.63**
								Total	**5000000.00**

Certificate.

1 The rates adopted based on the PWD SR, Bangalore circle for year 2016-17.
2 The provisions made in the estimate are necessary and essential.
3 The workspot was inspected and work is found to be necessary.
4 The area comes within the Bruhat Bangalore Mahanagara Palike limits.

Assistant Engineer

Assistant Executive Engineer

Executive Engineer 7.20 11/17

BRUHAT BANGALORE MAHANAGARA PALIKE

Project: Improvements to Roads and Drains at Markendeya Nagar main road and cross road in Ward No 05 Byatarayanapura Sub division

Est Cost: =30.0Lakh

No.	Description of work	Unit	No.	Length m	Breadth m	Depth m	Quantity	Rate in Rs.	Amount in Rs.
	KSRRB 200-8. Clearing and grubbing road land including uprooting rank vegetation, grass, brush, shrubs, saplings and trees of girth upto 300mm, by manual means, in area of light jungle, removal of stumps, disposal of unserviceable materials, stacking of serviceable materials labour charges complete as per specifications. MORTH / Chapter 2 (P.No.136, I.No.18.11 of PW, P&IWTD SR 2016-17)								
	Vegetation Clearance	Cum							
	Markandeya nagar								
	2nd cross		2	125.00	1.20		300.00		
	3rd cross		2	130.00	1.50		390.00		
	4th cross		2	135.00	1.20		324.00		
	Main Road		2	150.00	1.30		390.00		
							1404.00	6.36	**8929.44**
	KSRRB M300-1. Earth work excavation by manual means in ordinary soil involving an average horizontal throw upto 2 meters and an average lift upto 0.5m, excavated surface levelled and sides neately dressed, the disposed earth to be levelled neatly after breaking of clods complete as per specification. MORTH / Chapter 3 (P.No.142, I.No.19.1 of PW, P&IWTD SR 2016-17)								
	Desilt	Cum							
	Markandeya nagar								
	2nd cross		2	125.00	0.50	0.45	56.25		
	3rd cross		2	130.00	0.50	0.45	58.50		
	4th cross		2	135.00	0.50	0.45	60.75		
	Main Road		2	150.00	0.50	0.45	67.50		
							243.00	186.92	**45421.56**
3	KSRRB M300-14. Excavation for roadwork in soil with hydraulic excavator of 0.90 cum bucket capacity including cutting and loading in tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and transporting to embankment location and complete as per specifications. MORTH Specification No.301 (P.No.143, I.No.19.14 of PW,P&IWTD S.R 2016-17)								
	Road Portion	Cum							
	Markandeya nagar								
	2nd cross		1	125.00	6.70	0.20	167.50		
	3rd cross		1	130.00	6.50	0.20	169.00		
	4th cross		1	135.00	6.20	0.20	167.40		
	Main Road		1	165.00	6.10	0.20	201.30		
							705.20	155.16	**109418.83**
4	KSRRB M 400-17, Providing, laying, spreading and compacting graded stone aggregate to wet mix macadam specification including premixing the Material with water at OMC in mechaniqal mix plant carriage ' of mixed Material by tipper to site, laying in uniform layers with paver in sub- base/ base course on well prepared surface and compacting with vibratory roller to achieve the desired density.complete as per specifications. MORTH Specification No. 406 (P.No.158, I.No.20.18 of PW,P&IWTD SR 2016-17)								
	Markandeya nagar	Cum							
	2nd cross		1	125.00	6.70	0.23	192.63		
	3rd cross		1	130.00	6.50	0.23	194.35		
	4th cross		1	135.00	6.20	0.23	192.51		
	Main Road		1	165.00	6.10	0.23	231.50		
							810.98	1768.08	**1433877.52**

	surface of granular Base such as WBM WMM including clearing of road surface and spraying primer at the rate of 0.60 kg/sqm using mechanical means complete as per specifications. As per MORTH specification clause No. 502 (P.No.161, I.No.21.6 of PW,P&IWTD SR 2016-17)								
	Markandeya nagar	Sqm							
	2nd cross		1	125.00	6.70	--	837.50		
	3rd cross		1	130.00	6.50	--	845.00		
	4th cross		1	135.00	6.20	--	837.00		
	Main Road		1	165.00	6.10	--	1006.50		
							3526.00	27.56	**97176.56**
6	KSRRB M500-7 : Providing and applying tack coat using 80/100 grade bitumen (VG10) on prepared black topped surfaces at 2.5 Kg per 10 sqm, heating bitumen in boiler fitted with spray machineries complete as per specifications.MORTH / Chapter 5 (P.No.161 I.No.21.7 of PW,P&IWTD SR of 2016-17)								
	Markandeya nagar	Sqm							
	For Laying BC								
	2nd cross		1	125.00	6.70	--	837.50		
	3rd cross		1	130.00	6.50	--	845.00		
	4th cross		1	135.00	6.20	--	837.00		
	Main Road		1	165.00	6.10	--	1006.50		
							3526.00	11.66	**41113.16**
7	KSRRB M500-19. Providing and laying bituminous concrete 30-40 mm compacted thickness with VG30 Bitumen grade using 40-60 HMP using crushed aggregates of grading II, premixed with bituminous binder at 5.4% of mix and filler, transporting the hot mix to work site, laying with a mechanical paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MoRT&H specification clause No. 500.9 complete in all respects as per specifications. MORTH Specification No. 509 (P.No.165 of I.No.21.22.6 in PW,P&IWTD S.R 2016-17)								
	Markandeya nagar	Cum							
	2nd cross		1	125.00	6.70	0.04	33.50		
	3rd cross		1	130.00	6.50	0.04	33.80		
	4th cross		1	135.00	6.20	0.04	33.48		
	Main Road		1	165.00	6.10	0.04	40.26		
							141.04	7083.98	**999124.54**
8	KSRRB M800-13. Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads at 250 gms per sqm area, thickness of 2.5mm is exclusive of surface applied glass beads as per IRC:35. The finished surface to be level, uniform and free from streaks and holes complete as per specifications. MORTH Specification No. 803.(P.No.185, I.No.24.15 of PW,P&IWTD SR 2016-17)								
	Edge line	Sqm	2	555.00	0.10	--	111.00		
							111.00	542.72	**60241.92**
							Total Construction Cost		**2795303.530**
9							**Cost towards Preparation of DPR LS**		**27954.00**
							Cost towards PMC / Third Party inspection LS		**27954.00**
								Sub Total	**2851211.53**
							Miscellaneous and rounding off		**148788.47**
								Total	**3000000.00**

Certificate.

1 The rates adopted based on the PWD SR, Bangalore circle for year 2016-17.

2 The provisions made in the estimate are necessary and essential.

3 The workspot was inspected and work is found to be necessary.

4 The area comes within the Bruhat Bangalore Mahanagara Palike limits.

Assistant Engineer

Assistant Executive Engineer

Executive Engineer

26/11/17

BRUHAT BANGALORE MAHANAGARA PALIKE

Project: Improvements to Roads and Drains at Sriraj layout main roadand cross road in Ward No 05 Byatarayanapura Sub division

Sl. No.	Description of work	Unit	No.	Length m	Breadth m	Depth m	Quantity	Rate in Rs.	Amount in Rs.
1	KSRRB M300-1. Earth work excavation by manual means in ordinary soil involving an average horizontal throw upto 2 meters and an average lift upto 0.5m, excavated surface levelled and sides neately dressed, the disposed earth to be levelled neatly after breaking of clods complete as per specification. MORTH / Chapter 3 (P.No.142, I.No.19.1 of PW, P&IWTD SR 2016-17)								
	Desilt	Cum							
	Sriraj Layout								
	cross road 1		2	235.00	0.50	0.45	105.75		
	cross road 2		2	230.00	0.50	0.45	103.50		
	cross road 3		2	225.00	0.50	0.45	101.25		
	Cross Road 4		2	100.00	0.50	0.45	45.00		
							355.50	186.92	**66450.06**
2	KSRRB M300-14. Excavation for roadwork in soil with hydraulic excavator of 0.90 cum bucket capacity including cutting and loading in tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and transporting to embankment location and complete as per specifications. MORTH Specification No.301 (P.No.143, I.No.19.14 of PW,P&IWTD S.R 2016-17)								
	Road Portion	Cum							
	Sriraj Layout								
	cross road 1		1	235.00	5.10	0.20	239.70		
	cross road 2		1	230.00	4.50	0.20	207.00		
	cross road 3		1	225.00	5.00	0.20	225.00		
	Cross Road 4		1	100.00	4.90	0.20	98.00		
	Cross Roads		4	45.00	4.60	0.20	165.60		
							935.30	155.16	**145121.15**
3	KSRRB M 400-17, Providing, laying, spreading and compacting graded stone aggregate to wet mix macadam specification including premixing the Material with water at OMC in mechaniqal mix plant carriage ' of mixed Material by tipper to site, laying in uniform layers with paver in sub- base/ base course on well prepared surface and compacting with vibratory roller to achieve the desired density.complete as per specifications. MORTH Specification No. 406 (P.No.158, I.No.20.18 of PW,P&IWTD SR 2016-17)								
	Sriraj Layout	Cum							
	cross road 1		1	235.00	5.10	0.23	275.66		
	cross road 2		1	230.00	4.50	0.23	238.05		
	cross road 3		1	225.00	5.00	0.23	258.75		
	Cross Road 4		1	100.00	4.90	0.23	112.70		
	Cross Roads		4	45.00	4.60	0.23	190.44		
							1075.60	1768.08	**1901738.01**